



Axle Counter Cable

Eland Product Group **A8A**



Application

Axle Counter cable is used to connect the various elements of the AzLM Axle Counter System. It is suitable for installation in trackside cable troughing, buried duct route and installed in open air on the ballast and clipped to sleepers as required. Quad types XQS and XOZ are used to connect the EAK Junction box or termination to the EAK (Mushroom) and Multi Twisted pair types XPS and XPZ are used to connect EAK to the ACE (Axle Counter Evaluator) equipment.

Standards

NR/L2/SIG/30060

Technical Data

Network Rail Acceptance Certificate Number
PA05/03991

Conductor

Class 1 solid tinned copper conductor to BS EN 60228:2005 (previously BS6360)

Insulation

PE (Polyethylene) Type 03 to BS6234

Water Blocking Compound

Petroleum jelly (XPS and XQS types only)

Anti-Rodent Protection

Glass fibre weave

Moisture Barrier

Aluminium/polymer laminate tape

Sheath

PE (Polyethylene) Type 03C to BS6234 or LSZH (Low Smoke Zero Halogen)

Sheath Colour

Black

Temperature Rating

-25°C to +85°C

Minimum Bending Radius

7.5 x overall diameter

Dimensions

Type XPS Multi-twisted-pair Cables

Rail Catalogue Number	No. of Pairs x Conductor Diameter # x mm	Nominal Overall Diameter mm	Nominal Weight kg/Km
006/170007	2 x 0.9	13.8	215
006/170008	10 x 0.9	24.7	530
006/170009	12 x 0.9	26.4	584
006/170034	19 x 0.9	31.4	810
006/170035	24 x 0.9	34.5	982
006/170036	2 x 1.4	16.4	320
006/170037	10 x 1.4	31.4	910
006/170038	12 x 1.4	33.8	1016
006/170039	19 x 1.4	40.8	1460
006/170040	24 x 1.4	45.0	1787

Type XPZ Multi-twisted-pair Cables

Rail Catalogue Number	No. of Pairs x Conductor Diameter # x mm	Nominal Overall Diameter mm	Nominal Weight kg/Km
006/170023	2 x 0.9	13.8	200
006/170024	10 x 0.9	24.7	424
006/170025	12 x 0.9	26.4	468
006/170026	19 x 0.9	31.4	632
006/170027	24 x 0.9	34.5	746
006/170028	2 x 1.4	16.4	314
006/170029	10 x 1.4	31.4	807
006/170030	12 x 1.4	33.8	909
006/170031	19 x 1.4	40.8	1284
006/170032	24 x 1.4	45.0	1548

Type XQS Star-quad Cables

Rail Catalogue Number	Quad x Conductor Diameter # x mm	Nominal Overall Diameter mm	Nominal Weight kg/Km
006/170021	1 x 0.9	11.8	140
006/170050	1 x 1.4	13.8	221

Type XQZ Star-quad Cables

Rail Catalogue Number	Quad x Conductor Diameter # x mm	Nominal Overall Diameter mm	Nominal Weight kg/Km
006/170053	1 x 0.9	11.8	172
006/170033	1 x 1.4	13.8	226

The information contained within this datasheet is for guidance only. When selecting accessories such as cleats, glands, etc please note that actual cable dimensions may vary due to manufacturing tolerances.

Electrical Characteristics

Conductor Size mm	Maximum Attenuation at 40kHz dB	Maximum Mutual Capacitance nF/km (core to core)	Nominal Characteristic Impedance at 90kHz Ohms/km*
0.9	2.6	45	135
1.4	2.0	50	135

Pair	Core Colours	
1	White	Blue
2	White	Orange
3	White	Green
4	White	Brown
5	White	Grey
6	Red	Blue
7	Red	Orange
8	Red	Green
9	Red	Brown
10	Red	Grey
11	Yellow	Blue
12	Yellow	Orange
13	Yellow	Green
14	Yellow	Brown
15	Yellow	Grey
16	Violet	Blue
17	Violet	Orange
18	Violet	Green
19	Violet	Brown
20	Violet	Grey
21	Turquoise	Blue
22	Turquoise	Orange
23	Turquoise	Green
24	Turquoise	Brown

Type XQS and XQZ Star-quad Cables

Pair	Core Colours	
	a-Core	b-Core
1	White	Orange
2	Black	Green